

AiM InfoTech

MOTEC
PDM (500kbs / 1Mbs)

Release 1.00



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Software configuration

This document explains how to connect third party CAN expansion modules to AiM devices CAN2 bus.

The driver here documented allows to read data from a Motec PDM (PDM15, PDM16, PDM30, PDM32) programmed with its default fixed standard messages.

To correctly communicate with the AiM device, it is necessary to check with the software MoTec PDM Manager in the Global Setup, if the module is set with the following parameters. Refer to the manufacturer for additional details on the configuration procedure.

Baudrate: **500kbit/s** or **1Mbit/s**

Base Address CAN ID: **0x500**

Tick the flag for Enable CAN output

Please note: In case this module is going to be used with different parameters, the user can set up a custom driver from the **CAN Protocols** section of the AiM configuration software Race Studio 3. Check the dedicated manual from the AiM website www.aim-sportline.com – Documentation – Firmware/Software area.

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Wiring connection

These modules feature a bus communication protocol based on CAN, this data stream is accessible through the pair of pins indicated in the following chart, depending on the PDM in use.

PDM 16 26-pin Deutsch AS Pin nr	Function	AiM wire label (optional harness)
K	CAN High	CAN2 +
J	CAN Low	CAN2 –
PDM 32 37-pin Deutsch AS Pin nr		
A11	CAN High	CAN2 +
A10	CAN Low	CAN2 –
PDM 15 26-pin Deutsch DTM Pin nr		
B26	CAN High	CAN2 +
B25	CAN Low	CAN2 –
PDM 30 26-pin Deutsch DTM Pin nr		
B26	CAN High	CAN2 +
B25	CAN Low	CAN2 –

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AiM device configuration

Before connecting the kit to the AiM device set this up using AiM Race Studio software. The parameters to select in the device configuration are:

- ECU manufacturer: **MOTEC**
- ECU Model: **PDM 1MBIT** (Only RS3 – CAN2 Stream)

If there is only the AiM device connected to this module, enable the CAN Bus 120 Ohm Resistor.

<input checked="" type="checkbox"/> Enable the CAN Bus 120 Ohm Resistor
<input type="checkbox"/> Silent on CAN Bus

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“MOTEC – PDM_1MBIT / 500KBIT” protocols

Channels received by AiM loggers configured with “MOTEC – PDM_1MBIT” and “MOTEC – PDM_500KBIT” protocol are:

CHANNEL NAME	FUNCTION
IN 1-23	Input state channels 1-23 0 = inactive 1 = active
INT TEMP	Internal temperature
BATTERY	Battery voltage
GLB ERR	Global error 0 = no error 1 = Error outputs
TOT CURRENT	Total current
9V5 VOLT	9.5V internal rail voltage
OUT 1-32 CUR	Output current channels 1-32
OUT 1-32 LOAD	Output load percent channels 1-32
OUT 1-32 VOLT	Output voltage channels 1-32
OUT 1-32	Output state channels 1-32 0 = OFF 1 = ON 2 = OverCurrent error 4 = Fault error
IN 1-23 VOLT	Input voltage channels 1-23